


## Identifying the proper mix of growth-seeking strategies for Spanish SMEs: An analysis during times of economic boom and crisis

### Identificando las combinaciones más adecuadas de estrategias de búsqueda de crecimiento para las PYMES españolas: Un análisis en tiempos de bonanza y crisis económica

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#### Abstract

This study explores the potential effects of different combinations of growth-seeking strategies on performance in SMEs during long times of economic boom and crisis. Our hypotheses are tested on a representative sample of Spanish SMEs between 1994 and 2014. During these years Spain suffered one of the periods of greatest economic stability/growth in recent years (1994-2008), followed immediately by a period of severe crisis (2009-2014). Using dynamic panel data models, our findings reveal that four combinations exhibit a positive and statistically significant effect on performance in times of economic boom: a related product strategy combined with low, moderate, or high levels of internationalization, and an unrelated one combined with a moderate level of internationalization. Meanwhile, we find only two combinations with a positive impact on SME performance in times of crisis: a related product strategy combined with low and moderate levels of internationalization, respectively

**Keywords:** SMEs; growth-seeking strategies; product and geographic diversification; economic growth; crisis

**JEL Classification:** F23; L25; L60; M16

#### Resumen

Este estudio explora los posibles efectos de diferentes combinaciones de estrategias de búsqueda de crecimiento sobre el desempeño de las PYMES durante largos períodos de bonanza y crisis económica. La contrastación de las hipótesis formuladas se realiza en una muestra representativa de PYMES españolas entre 1994 y 2014. Durante estos años España sufrió uno de los períodos de mayor estabilidad/crecimiento económico de los últimos años (1994-2008), seguido inmediatamente por un período de grave crisis económica (2009-2014). Utilizando modelos de datos de panel dinámicos, nuestros resultados revelan que cuatro combinaciones tienen un efecto positivo y estadísticamente significativo sobre el desempeño de las PYMES analizadas en tiempos de auge bonanza económica: una estrategia de diversificación de producto relacionada combinada con niveles bajos, moderados o altos de internacionalización, y una estrategia de diversificación de producto no relacionada combinada con un nivel moderado de internacionalización. Por su parte, encontramos solo dos combinaciones con un impacto positivo en el desempeño de las PYMES españolas en tiempos de crisis: una estrategia de diversificación de producto relacionada combinada con niveles bajos y moderados de internacionalización, respectivamente

**Palabras clave:** PYMES; estrategias de crecimiento empresarial; diversificación de producto y geográfica; crecimiento económico; crisis

**Clasificación JEL:** F23; L25; L60; M16

#### How to cite this article

Benito-Osorio, D., Colino-Fernández, A., Guerras-Martín, L. Ángel, & Zúñiga-Vicente, J. Ángel. (2023). Identifying the proper mix of growth-seeking strategies for Spanish SMEs: An analysis during times of economic boom and crisis. *Small Business International Review*, 7(2), e605. <https://doi.org/10.26784/sbir.v7i2.605>

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## 1. Introduction

Two of the most important strategic decisions that firm managers must make are related to the diversification or otherwise of both products and markets. Product and geographic diversification (PD and GD, respectively) are typically considered to be two key strategies for business development and growth (Ansoff, 1965; Mammen et al., 2021). These two decisions are also made simultaneously by firm managers. Since the pioneering study by Kim, Hwang and Burgers (1989), there has been a lively debate on whether both growth-seeking strategies are complementary, or not; that is, whether the joint adoption of both strategies actually helps to improve or deteriorate performance, and thus ultimately grow the firm (or not). This topic has drawn the attention of a growing number of scholars over the past thirty years, but the findings are still far from being conclusive (see Guerras-Martín et al., 2020 and Arte & Larimo, 2022).

A review of the existing literature reveals that most prior studies have been conducted across a variety of institutional contexts, timeframes and large firms (see Zúñiga-Vicente et al., 2019 and Arte & Larimo, 2022), but practically none of them has focused on the possible impact of drastically changing environmental conditions within a sample of SMEs (some remarkable exceptions are Berry et al., 2001; Tan & See, 2004; Wengel & Rodriguez, 2006, or Shin et al., 2022). Our study aims to fill this important lacuna in the literature, as it empirically explores the potential impact that significantly different macroeconomic conditions (i.e. economic 'boom' and severe 'crisis') may have on the relationship between the combination of growth-seeking strategies and performance in Spanish SMEs. More specifically, we seek to compare the joint effects that different combinations of different types and levels of PD and GD strategies have on performance in times of economic prosperity and crisis. Our main assumption is that different combinations will have an uneven impact on SME performance due to the influence of radically different contextual conditions that firm managers must negotiate. Thus, in line with past research (e.g., Prescott, 1986; Vicente-Lorente & Zúñiga-Vicente, 2006; Shen et al., 2018), we recognize that environmental factors may significantly influence the strategy-performance linkage.

It is important to examine this issue because drastically changing macroeconomic conditions may pose the need to face and respond to different challenges and opportunities. SME managers may be forced to adopt different combinations of strategies to achieve a better performance, and thus guarantee the growth and survival of their businesses. Our study reveals the extent to which this is true or not and therefore sheds insights on the preferable mix of diversification strategies that allow SME managers to achieve their target performance in times of both economic stability/growth and severe crisis.

Certainly, a context of crisis presents a unique set of challenges and opportunities for SME managers seeking to ride out the storm and grow their business. During times of economic crisis, most industries and markets tend to undergo quick changes and are subject to great environmental instability/uncertainty, whereby managers are very likely to be forced to reassess their decision-making processes (Beliaeva et al., 2020; García-Carbonell et al., 2021), including those involving specific products and where to market them. This study therefore seeks to provide a finer-grained picture of the potential effects that different combinations of diversification strategies adopted by SME managers have on performance when facing wholly diverse and volatile environmental conditions. This is important because the findings suggest how these managers can tackle a situation such as the last few years, which has involved a severe global crisis triggered by the Covid-19 pandemic and/or the conflict in Ukraine, in terms of choosing the mix of the most appropriate strategies to ensure their firms can continue to grow and, ultimately, survive.

This study focuses on SMEs because they are key economic actors in the business ecosystem around the globe (Benito-Osorio et al., 2020). According to the Organization for Economic Cooperation and Development (OECD), SMEs provide about 70% of total jobs, account for around 99% of all firms, and contribute 50%-60% of the gross value added (GVA) (OECD, 2017). Reality shows that economic crises may have *a priori* a more severe impact on SMEs than large corporations, reducing their development and growth opportunities, and ultimately increasing the rate of bankruptcies. This is because SMEs tend to be more sensitive to the economic context and more affected by it, being among the first to be impacted by the adverse effects of a recession (OECD, 2009, 2022) as a result of the liability of smallness. Specifically, SMEs may suffer significantly more during times of economic downturn because they tend to exhibit a paucity of financial resources and, thus, show a greater dependence on bank credit thanks to lower available liquidity. Likewise, these firms frequently present a relative lack of human capital, technological resources/capabilities, and financial skills to face a severe crisis with more options for succeeding (Eggers, 2020; OECD, 2009, 2022). In turn, their heavy dependence on a small number of suppliers, buyers, and markets (Nugent & Yhee, 2002; Bowen, 2020) may also compromise largely their traditional activities when confronted with a severe crisis.

However, SMEs compared to large corporations may have a greater flexibility in adapting to tricky and uncertain situations (e.g., downturn) as they may be less subject to inertia and rigidity and are also often more capable of exploiting specific national/international niche markets. Some studies show that diversified SMEs, particularly international ones, are better positioned to overcome a crisis (e.g., Berry et al., 2001; Wengel & Rodriguez, 2006 for Indonesia or Tan & See, 2004 for Singapore, during the 1997 Asian economic-financial

crisis). Indeed, in the wake of the global crisis of the late 2000s, these firms have proven to be pivotal players in the economic revival (Hessels & Parker, 2013; European Commission, 2015; OECD, 2017). Accordingly, it is also crucial from a public policy perspective to improve our understanding of the strategic behavior followed by SMEs.

We use a database of Spanish SMEs between 1994-2014. This timeframe includes a long period of strong economic growth (1994-2008), as well as a time of severe crisis (2009-2014). The crisis in Spain began and ended later compared to other countries. The firms considered grappled with pronounced changes in the economic sphere over this period, thereby we expect a likely influence in the relationship between the different mix of growth-seeking strategies adopted by SME managers and performance. Our attention in this timeframe is justified because our findings could also be extrapolated to SMEs from other countries that suffered the same crisis or might have to cope with similar environmental conditions, such as a possible pandemic, an energetic crisis, or a context of war.

Our study makes several contributions. First, it evaluates the potential relevance of one of the key factors of the institutional framework for a firm activity: macroeconomic conditions. Thus, this study offers a more accurate picture of the potential influence of environmental conditions on the strategy-performance relationship. Second, we focus on SMEs' PD and GD strategies given that both types of strategies have typically been attributed to larger firms because SMEs seem to be especially limited in terms of resources and capabilities (due to the liability of smallness), and thus are *a priori* more vulnerable to drastic environmental shifts. Research on SMEs has grown rapidly over the last years and, therefore, it is important to know which mix of growth-seeking strategies can also be beneficial for SMEs facing completely different macroeconomic conditions. Specifically, our study sheds light on which mix of growth strategies is better and/or worse for SMEs when macroeconomic conditions are favorable (economic boom) and unfavorable (crisis). Finally, in a related way, this study will allow us to identify if there is some mix of growth-seeking strategies for SMEs that could be preferable under favorable and unfavorable environmental conditions.

## 2. Theoretical background and hypotheses

SME managers pursue different types of corporate strategies to ensure their firms are competitive and can continue to grow and survive. This is precisely what happens with PD and GD strategies. They are interdependent growth-seeking strategies because they frequently require investment commitments to make better use of a similar set of resources in the different product and geographic markets in which a firm competes (Boehe & Jiménez, 2018; Teece, 2014). An SME that implements a PD strategy could see its financial performance improve if it also expands internationally. The proponents of the Resource-Based View (RBV) (e.g., Wernerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993) argue that this is because PD facilitates the use of strategic resources and exploits economies of scope and scale, and/or access to several geographic markets (i.e. countries), while market risks are diversified (Geringer et al., 2000; Mammen et al., 2021). Yet is this the case regardless of the specific type of diversification strategy adopted and the economic context faced by SMEs managers? We assume that the performance of SMEs may be significantly influenced not only by the combination of a specific type of PD and the degree of GD adopted by their managers but also, more importantly, by the opportunities and/or threats that arise from the macroeconomic environment in which SMEs compete.

Rather than considering one specific type of growth-seeking strategy as a principal effect and another as the mediator or moderator one, we examine the joint or interactive effects by simultaneously evaluating the potential impact that each mix of growth-seeking strategies has on performance under two radically different environmental conditions (economic stability/growth and economic-financial crisis). We assume that SME managers may opt for one or other of the more common PD strategies, namely, related and unrelated (RPD and UPD, respectively). Obviously, they can also choose not to diversify. As regards their GD strategy, they may choose low, moderate, or high levels of internationalization (LGD, MGD, and HGD, respectively).

### 2.1 The joint effects of growth-seeking strategies during times of economic boom

Most prior studies have generally assumed that the potential interrelationships between different growth-seeking strategies (such as PD and GD) are primarily shaped by a firm's existing resources and competitive factors affecting their portfolio of activities rather than by the potential threats/opportunities within the broader business environment. In this vein, it seems obvious that during times of "normality" or economic expansion, SME managers may find it easier to discover highly profitable opportunities for PD within their domestic markets. Furthermore, because demand is high in most domestic markets, both SMEs and large corporations may face less pressure from their competitors. This circumstance could alleviate the need to search for further opportunities abroad (Hautz et al., 2014; Lim et al., 2009). Moreover, in times of global expansion, SMEs usually face lower international competitive constraints, whereby internationalization can become an especially attractive strategic choice. In a context like this, managers of these firms may further exploit all the potential advantages of GD.

SMEs following an RPD tend to deploy their resources around their core business(es). Among SMEs that opt for an RPD strategy, the opportunity to exploit economies of scale/scope, share resources and core competences, and take advantage of interdependences across various business units may substantially rise when these firms also extend their operations to new foreign markets (Hitt, Hoskisson, & Ireland, 1994; Hitt, Hoskisson, & Kim, 1997; Mammen et al., 2021). Additionally, according to the RBV, the resources and structures that SMEs with an RPD strategy use may be able to assist their managers to simultaneously take up a GD strategy more easily (Hitt et al., 1997). These SME managers normally face fewer problems managing asymmetric activities, it is also less costly for them to apply financial and strategic controls and can concentrate on effectively integrating their strategic goals across several business segments (Chang & Wang, 2007).

If SMEs diversify into a related array of products, they are particularly likely to be confronted with similar competitive contexts, suppliers, distribution systems, and customer preferences. When SMEs also choose to expand into foreign markets (at LGD and MGD), then they can substantially mitigate the mismatch between their external environments and internal structures. Compared to SMEs pursuing an UPD strategy, they need not to spend too much time and resources adjusting across different business units, thereby considerably reducing their organizational costs (Chang & Wang, 2007). These SMEs might share technological activities and/or production facilities in an attempt to maximize efforts across several units, and thus achieve necessary efficiency (Barney 1996). As also suggested by Markides and Williamson (1994), these SMEs might largely benefit from “asset amortization” because they can divide the costs of assets that have already been capitalized by distributing their use among several (related) businesses.

During times of global economic upswing, environmental instability and uncertainty are lower, so SME managers following an RPD strategy while also expanding at LGD and MGD could harness the full potential of such interaction. Whenever HGD, not only does social and cultural diversity increase but also competitive and demand heterogeneity in the different countries, which ultimately also augments complexity within management. It might considerably hamper the ability SME managers have to exploit synergies across different business units and involve high managerial and transaction costs, which might entail a certain decline in the positive performance of SMEs that have pursued HGD and RPD strategies.

We, therefore, expect SMEs combining an RPD strategy and low-moderate levels of GD to record the best performance compared to those SMEs pursuing the same strategy but HGD during times of economic upswing. This means that during such times, a RPD strategy combined with low-moderate levels of GD and, to a lesser extent, with HGD can be considered complementary strategies because they lead to a significantly improved firm performance. Thus, we hypothesize the following:

**Hypothesis 1a:** *Related product and geographic diversification strategies will have significant and positive joint effects on the firm performance of SMEs, with the more positive effects of related product diversification being more evident for low-moderate levels of geographic diversification during times of economic upswing.*

Internationalization may help SME managers following a UPD strategy to exploit economies of scale that are unreachable when they compete exclusively in the home markets. Specifically, MGD may also allow SMEs pursuing a UPD strategy to achieve unique and inimitable synergies beyond strictly financial ones (Hitt et al., 1994). Thus, these SMEs may more readily benefit from different types of synergies; for instance, by sharing marketing and technological information, or by transferring managerial competences across different business units (Markides & Williamson, 1996; Robins & Wiersema, 1995; Zhang et al., 2019). Nevertheless, we contend that performance may substantially suffer if GD is high or low. The managers of unrelated diversified SMEs that also pursue HGD might be more skillful at overseeing internal heterogeneity, as they have much more complex structures to manage a more unfamiliar business portfolio. But the greater diversity caused by the simultaneous choice of both growth-seeking strategies may also incur higher coordination costs and information overload, thereby reducing most of its potential benefits (Chang & Wang, 2007; Zúñiga-Vicente et al., 2019).

However, resources are not always scale-free and can present important constraints when attempting to be leveraged and deployed simultaneously over a large number of products-markets. This is what usually occurs with managerial resources, among others. Managing UPD in many host markets normally requires a higher level of managerial competencies (Li et al., 2012) which sometimes are not easy to achieve, especially in SMEs. In this context, it is also more likely that other organizational inefficiencies or diseconomies will emerge in SMEs as a result of the existence of contesting “dominant logics” across different businesses (Prahalad & Bettis, 1986; Markides, 1994). The existence of higher coordination and information costs and managerial and organizational problems could have detrimental effects on the performance of SMEs opting for combining a UPD strategy and HGD. The coordination, control, and information mechanisms required (for managing multiple transactions among many unrelated and geographically diverse business units) may incur greater costs that outweigh the benefits derived from discovering and exploiting new market prospects (Hitt et al., 1997). Moreover, all SME resources could not be equally valuable across a broad variety of industries and markets. Likewise, when an unrelated diversified SME also focuses on a limited amount of host markets (i.e.

LGD), it may be difficult to marshal all the potential required to leverage its strategic resources to exploit economies of scale, so its performance may also suffer.

We, therefore, expect those SMEs combining a UPD strategy and MGD to post the best firm performance compared to those SMEs pursuing the same PD strategy but with HGD or LGD during times of economic growth. We contend that a UPD strategy and MGD are complementary strategies at such times, as this combination of growth-seeking strategies may significantly improve performance. This leads us to put forward the following:

**Hypothesis 1b:** *Unrelated product and geographic diversification strategies will have significant and positive joint effects on firm performance solely for those SMEs with moderate levels of geographic diversification during times of economic growth.*

## 2.2 The joint effects of growth-seeking strategies during times of economic crisis

During a global recession, firm behavior and performance are expected to experience major changes. Some scholars define an economic crisis as a period subject to unfavorable and unexpected shifts in the environment that firm managers are forced to tackle (e.g., Vaaler & McNamara, 2004). Other scholars define crises as high-impact events that can dramatically influence a firm's viability and require it to make new strategic decisions rapidly (García-Carbonell et al., 2021; Pearson & Clair, 1998).

When an economic downturn happens, most firms, but especially SMEs, are more constrained, because these firms are more likely to suffer from a credit crunch (Serrasqueiro et al., 2021). Growth opportunities may also become scarcer in their home market, and profit volatility may increase substantially. Improve access to finance is normally viewed as one of the essential challenges for the inception, growth, and survival of SMEs. This problem was seriously exacerbated by the global crisis of the late 2000s because SMEs suffered a double shock (OECD, 2009): a sharp decline in demand for most goods and services and a credit squeeze, which seriously damaged their cash flows. Specifically, soon after starting the crisis, business credit was in short supply for most SMEs. Bank spreads increased dramatically for small loans in late 2008. Faced with this credit crunch, most SMEs began to explore other options for financing their investments, such as self-funding or reserves (Chowdhury, 2011; OECD, 2009, 2022).

Large diversified firms (especially unrelated diversifiers) tend to benefit from the existence of internal capital markets for financing their potential investments. Such capital markets can enable firms to dodge several financial constraint issues and, ultimately, incur transaction costs that are typically linked to external finance (Almeida et al., 2015; Staglianò et al., 2014). However, compared to large corporations, SMEs confront an uphill struggle to access a developed and efficient internal capital market (Fier et al., 2013). Furthermore, when a crisis affects the entire economy of a country and globally, the customer base for most firms (both large and SMEs) from home and host countries will inevitably shrink, as clients tend to be much more demanding and judicious in their purchase decisions (Lim et al., 2020).

During times of economic downturn, increased competitive pressure is more likely to be placed on both non-diversified and diversified firms in multiple product-market contexts. A period of crisis increases the pressure on SME managers to search for further opportunities aside from the home markets through expansion abroad, to compensate, at least partially, for the drop in domestic demand (Hautz et al., 2014). In a global economic downturn, nonetheless, both SMEs and large corporations will also face growing competitive tension abroad, from other countries with lower economic growth rates are more likely to seek opportunities outside of their domestic markets (Zúñiga-Vicente et al., 2019). However, because countries can work differently (i.e. with different economic growth rates), doing business or trade in different host markets might provide an attractive option to counter aggressive expansion by rivals (Hill & Jones, 1998). In turn, firms selling their products in different countries "will not be held hostage to the fluctuations of demand and constraints of supply of any one national market" (Tongli et al., 2005: 67).

Instability and uncertainty are higher during times of downturn, so SME managers are called upon to implement more permanent intra-firm communication to get all the potential benefits of business interrelatedness. SMEs may also require additional resources to monitor and review the performance of different business units (Jones & Hill, 1988). The cooperative linkages established between different business units could also entail a loss of independence for business managers, which might mean more inflexible and slower responses to new demand conditions in each national market (Qian, 1997; Chang & Wang, 2007). The coordination and governance costs associated with the management of such organizational difficulties might partially cut down the performance of SMEs opting for an RPD strategy and low-moderate levels of GD during times of downturn compared to the performance of their counterparts that opt for the same mix of strategies during times of economic boom.

Within the context of greater instability and uncertainty prompted by a global crisis, the potential access to new income sources and risk diversification are critical aspects for SMEs (Helfat et al., 2007), which could at

least partially offset the inevitable costs of such advantages. There are some contextual and managerial grounds for suggesting that deploying bundles of resources generated across a larger set of related products and different foreign markets may bring certain gains in performance, thus increasing SMEs' chances of survival and, ultimately, their prospects of growth (Freixanet & Renart, 2020), even during times of downturn. Moreover, in this context, cash flows obtained from related diversified businesses might provide the internally generated resources to fund growth opportunities in new markets when external funding is hard to come by as a consequence of credit restrictions in external capital markets.

In contrast, the choice of HGD by SMEs following an RPD strategy may have sundry harmful effects on performance in times of crisis. On the one hand, the simultaneous generation of capabilities related to inner and outer processes for handling a variety of products and markets and tackling the limitations stemming from their liabilities of smallness and foreignness (because of expanding into more countries) are likely to cause more organizational tension on the set of existing resources and capabilities (Freixanet & Renart, 2020). An increase in the level of GD is also likely to significantly increase logistics, transportation, and/or administrative costs, along with all those costs necessary for sharing information and knowledge with different local partners and customers (Freixanet & Renart, 2020; Patel et al., 2018). The same is true for institutional and cultural distance concerning to the search, negotiation, monitoring, and enforcement costs of agreements with foreign partners (Freixanet & Renart, 2020; Qian et al., 2013). The existence of divergences in the conditions between the home and host markets could significantly affect the organization of such relationships, which may pose additional costs for HGD in SMEs (Hashai, 2011; Reeb et al., 1998). Differences in country profiles and consumer purchasing behaviors can increase the resources devoted to understanding and responding to local demands and specific needs and could add difficulties and costs in times of downturn, particularly for SMEs with limited information/knowledge and subpar organizational routines (Freixanet & Renart, 2020; Goerzen & Beamish, 2003).

In short, a higher degree of GD is likely to provide those SMEs that have also opted for an RPD strategy with attractive prospects for new income streams and risk diversification. Nevertheless, these advantages may coexist with more costs and managerial/organizational tensions that could more than offset such advantages because of the downturn. We expect those SMEs combining an RPD strategy and low-moderate levels of GD to outperform those SMEs pursuing the same strategy but with HGD during times of economic crisis. We, therefore, contend that an RPD strategy combined with both low-moderate (high) levels of GD are complementary (substitutive) at these times, as these combinations may considerably improve (deteriorate) SMEs performance. This leads us to hypothesize the following:

**Hypothesis 2a:** *Related product and geographic diversification strategies will have significant and positive joint effects on firm performance for those SMEs with low-moderate levels of geographic diversification, but will have significant and negative joint effects on performance with high levels of geographic diversification during times of economic crisis.*

Drawing on organizational evolutionary theory, several scholars argue that when firms simultaneously expand their product range and markets, major changes in contextual conditions —as a result, for example, of a global crisis— might generate a considerable organizational complexity that raises additional concerns for managers (Abatecola et al., 2016). If SME managers wish to preserve their firms' performance, they will probably need to make some managerial and organizational changes. Their main aim accordingly will be to fulfill a proper fitting between new outer contexts and inner settings (Chang & Wang, 2007). As noted above, managers in SMEs following an RPD strategy may well have to deal with relatively similar, distribution systems, suppliers, and customers (Kumar, 2013), while their peers with a UPD strategy must contend with varying preferences of customers, distribution systems, suppliers, and competitive environments. The time and resources dedicated to achieving a proper internal-external fitting will therefore increase organizational costs. However, the greater uniformity of activities across different business units in related product diversifiers means the required adjustments can be more readily applied, and thus the overall fitting costs are likely to be minimal, and anyhow *a priori* no higher than for unrelated diversifiers. The more heterogeneous activities across businesses and countries may require SMEs with UPD strategies to undertake more complex and costly managerial and organizational changes to better fitting diverse foreign markets (Chang & Wang, 2007; Ruigrok & Wagner, 2003), especially in times of downturn. It is therefore to be expected that the costs of internal-external adjustments in SMEs that follow a UPD and low-moderate levels of GD, will exceed those in SMEs following similar levels of GD and an RPD strategy. In the case of these SMEs, the benefits of RPD (i.e. exploitation of economies of scale/scope across different global markets) are expected to outweigh the overall costs of adjustment in times of crisis. The evidence also shows that in periods of severe crisis firms tend to ditch products unrelated to their core products, concentrating their resources on related products (Wenzel et al., 2020).

In turn, the combination of UPD and HGD could pose sizable coordination issues and managerial problems (Kumar, 2009) in times of downturn. Managers would be forced to continuously coordinate their firms' activities in manifold industries and geographic markets. This generates a great deal of tension for managers, as they must grapple with constant restrictions on information processing and human capital constraints for

monitoring and controlling all businesses in diverse foreign markets. Managers will need a thorough understanding not only of several industries, but also of a plenty of regulations, suppliers, customers, and competitors across different countries. Accordingly, managers face considerable information variability (Chang & Wang, 2007). Precisely, when SME managers require more resources and information and resources to manage coordination, they can encounter major impediments that limit their ability to gather and process information for successfully coordinating all their operations. Specifically, these managers will have to deal with significant coordination costs and other potential organizational diseconomies, as well as inefficiencies derived from conflicting “dominant logics” across different businesses and markets (Prahalad & Bettis, 1986; Markides, 1992). If a situation like this is already hard to handle in times of growth (as noted above), it is exacerbated in times of downturn due to the important resource limitations that characterize SMEs and the high degree of environmental uncertainty (Bowen & Sleuwaegen, 2017; Garrido-Prada et al., 2018). Ultimately, international expansion might have a detrimental impact on the performance of SMEs also operating in disparate business segments in times of global downturn.

We therefore expect the combination of UPD and low-moderate-high levels of GD will negatively impact on SME performance in times of crisis, that is, they are substitutive strategies, as they may significantly deteriorate the performance of SMEs. This leads us to:

**Hypothesis 2b:** *Unrelated product and geographic diversification strategies will have significant and negative joint effects on firm performance for those SMEs with low-moderate-high levels of geographic diversification during a period of economic crisis.*

Table 1 summarizes the hypothesized interaction effects on the performance of six potential combinations of growth-seeking strategies (in terms of expected positive/negative performance, and hence whether each mix can be viewed as complementary or substitutive) when environmental conditions correspond to a context of economic boom or crisis.

**Table 1.** Hypothesized joint effects of seeking-growth strategies during times of economic stability/growth and crisis

		Combinations of PD and GD strategies <sup>(1)</sup>					
		RPD-LGD	RPD-MGD	RPD-HGD	UPD-LGD	UPD-MGD	UPD-HGD
Environmental conditions	Economic stability/growth	Positive performance (Complem.)	Positive performance (Complem.)	Positive performance (Complem.)	Negative performance (Substitut.)	Positive performance (Complem.)	Negative performance (Substitut.)
		<i>Hypothesis 1a</i>			<i>Hypothesis 1b</i>		
	Economic crisis	Positive performance (Complem.)	Positive performance (Complem.)	Negative performance (Substitut.)	Negative performance (Substitut.)	Negative performance (Substitut.)	Negative performance (Substitut.)
		<i>Hypothesis 2a</i>			<i>Hypothesis 2b</i>		

RPD-LGD: Related product diversification and low levels of geographic diversification

RPD-MGD: Related product diversification and moderate levels of geographic diversification

RPD-HGD: Related product diversification and high levels of geographic diversification

UPD-LGD: Unrelated product diversification and low levels of geographic diversification

UPD-MGD: Unrelated product diversification and moderate levels of geographic diversification

UPD-HGD: Unrelated product diversification and high levels of geographic diversification

## 3. Methods

### 3.1 Data collection and sample

We use data from the Survey on Business Strategies (SBS) between 1994–2014. It is a statistical research tool drawn up by an organization dependent on the Spanish Government (SEPI Foundation) that each year surveys a large sample of Spanish manufacturing firms ensuring its representativeness. All the information included in this survey is subject to rigorous statistical consistency and quality controls. Indeed, many prior studies on business diversification in Spain are also based on this survey (e.g., Benito-Osorio et al., 2015; Merino &

Rodríguez, 1997; Zúñiga-Vicente et al., 2019). After analyzing our dataset (i.e. to identify and drop missing data and outliers), the final sample is an unbalanced panel of 2,217 SMEs and 21,138 observations (firm x year).

The sample meets certain valuable requirements as a suitable empirical setting for testing all our hypotheses. First, it considers SMEs. We have followed the definition of SMEs provided by the EU in terms of headcount (firms with fewer than 250 employees). Second, it includes SMEs with international activity via exports—which is considered the dominant strategy for their internationalization—and domestic SMEs (e.g., Benito-Osorio et al., 2016; Golovko & Valentini, 2011). Third, it contains firms with many observations of the same variables over a long timeframe, which is useful for avoiding the common shortcomings linked to cross-sectional or pooled data analysis. Table 2 reports information about the number of firms (i.e. SMEs) and observations considered per year.

**Table 2.** Number of firms and observations per year

Year	Firms	Observations
1994	1,121	1,033
1995	1,163	1,050
1996	1,039	966
1997	1,064	990
1998	1,210	1,111
1999	1,083	995
2000	1,070	997
2001	1,141	1,033
2002	1,034	981
2003	1,008	814
2004	897	893
2005	893	830
2006	1,223	1,098
2007	1,295	1,104
2008	1,268	1,076
2009	1,266	1,054
2010	1,269	1,065
2011	1,264	1,142
2012	1,108	979
2013	1,159	1,043
2014	976	884
Total	---	21,138

Finally, we chose this sample from 1994 to 2014 for two further reasons: on the one hand, some of the variables used in our study lacked data before the year 1994, and 2014 was the last year for which this survey provided us with disaggregated data on RPD and UPD strategies, and this is a critical issue for testing our hypotheses. On the other hand, this window ranges two very distinct phases in Spain: one of strong economic growth (1994-2008) and the other of severe crisis (2009-2014). The global crisis of the late 2000s has been widely considered the worst international crisis since the Great Depression. It therefore provides a perfect setting for our research, as practically all Spanish firms were seriously affected by this crisis.

The period 1994-2008 recorded some of the longest uninterrupted growth in Spain's economy during the last 50 years. Between 1994 and 2008, the cumulative GDP increased by 54%, i.e., an annual average rate of 3.6%, while per capita GDP rose from €10,800 in 1994 to €24,300 in 2008. Spain posted very high growth compared to most EU member states and other advanced countries (The World Bank, 2018). Spanish GDP grew the most in 2000 (5.3%). The average annual ROA of Spanish firms between 2000-2008 was equal to or higher than 7.70%. Spain became the eighth economic power in the world. By contrast, from 2009-2014 Spain suffered one of the worst economic crises in recent times. Unlike most advanced countries, this crisis became evident in full force in 2009, and its results were devastating because it caused a severe economic downturn, a dramatic rise in total unemployment, and large numbers of company bankruptcies in most sectors of the economy; for example, GDP fell 9.2%. The highest drops in GDP were recorded in 2009 (-3.6%), 2012 (-2.9%), and 2013 (-1.7%). Per capita GDP in 2014 stood at €22,780. The unemployment rate rose from 13.8% in 2008 to 23.7% in 2014, with the highest rates being recorded in 2012 (25.8%) and 2013 (25.7%). The overall number of firms decreased by around 9% between 2008 and 2014, affecting practically all sectors.



### 3.2 Variables

**Dependent variable:** Return on Assets (ROA). Our measure of firm performance is ROA, defined as the ratio between gross earnings and total assets. We use this variable because the SBS database provides solely accounting data, and the bulk of the SMEs considered in our sample are not listed on the stock market. It is precisely the profitability of assets that, independently of their financing, generally determines whether an SME is economically viable. ROA has been used by many prior studies interested in examining not only the individual effects of growth-seeking strategies on performance (e.g., Benito-Osorio et al., 2016; Lu & Beamish, 2004; Stadler et al., 2018) but also the joint effects of these strategies on SMEs and large corporations as well (e.g., Benito-Osorio et al. al., 2020; Geringer et al. al., 1989; Hitt et al. al., 1997; Kumar, 2009; Zúñiga-Vicente et al. al., 2019).

#### Independent variables

**Product diversification (PD).** A common classification of PD distinguishes between RPD and UPD strategies. The SEPI Foundation has provided us with reliable and objective information on those SMEs considered in our study that have followed RPD and UPD between 1994-2014. Specifically, this study has provided us with two dummy variables: Related Product Diversification (RPD), which takes a value of 1 when SMEs follow an RPD strategy, and 0 otherwise; and Unrelated Product Diversification (UPD), which takes a value of 1 when SMEs follow an UPD, and 0 otherwise<sup>1</sup>.

**Geographic diversification (GD)** is defined as the expansion into other countries or geographic areas. This means a firm's level of internationalization is provided by the number of different markets (countries or geographic areas) in which a firm is operating and their relative importance (measured as the total percentage of sales in each market) (Hitt et al., 1997: 767). Our GD index is calculated as follows:

$$GD = \sum_{i=1}^n S_i \ln \frac{1}{S_i} \quad (1)$$

where  $S_i$  is the sales figure for the global market region  $i$ , and  $\ln(1/S_i)$  is the weight given to each one. This measure considers the number of regions in which a firm operates ( $n$ ) and each one's share of its sales. We calculated the degree of GD assuming the four regions considered in the dataset between 1996 and 2014: Spain, EU member states, the Rest of OECD countries, and the Rest of the World. This classification is based on the level of economic development and geographical proximity between countries. This type of measure has also been used in many prior studies (e.g., Benito-Osorio et al., 2020; Chang & Wang, 2007; Hitt et al., 1997; Li et al., 2012; Mammen et al., 2021; Stadler et al., 2018).

The higher the value of this index, the higher the level of GD will be. We consider the linear, quadratic, and cubic terms of this variable to identify how is the link between GD and performance and, thus, verify the existence of three levels of GD. Therefore, we expect all the terms to be significant.

Several studies have found solid support for the existence of three levels (or stages) in the GD-performance linkage in SMEs (e.g., Benito-Osorio et al., 2016, 2020; Cho & Lee, 2018; Fisch, 2012). These studies report that SME performance is negatively related to HGD and LGD, and positively related to MGD, thus providing a longitudinal/dynamic explanation for the GD-performance linkage. We calculate the interaction terms (i.e. joint effects) between the linear, quadratic, and cubic terms of GD (associated with low, moderate, and high levels, respectively) and each PD measure (RPD and UPD). This will enable us to identify the combinations of growth-seeking strategies that are linked to better performance.

#### Control variables

A set of control variables that may influence performance and both strategies are also considered in our analysis. Following past research (e.g., Benito et al., 2020; Chang & Wang, 2007; Cho & Lee, 2018; Hitt et al., 1997; Li et al., 2012; Lu & Beamish, 2004; Qian, 2002), we control for the following variables: *Sales growth*, calculated as the increase of turnover in a given period of time; *Age*, calculated as the difference between the current year and that of the firm's incorporation; *Human capital qualification (HCQ)*, calculated as the log of the ratio between personnel costs and the firm's overall headcount; the proxy for *Size* is overall headcount expressed in logarithmic form; *Advertising intensity*, calculated as the sum of expenditures on publicity, advertising, and public relations divided by total sales; *R&D intensity*, calculated as total firm's R&D expenditures divided by total sales; *Productivity*, measured through the ratio of value added to an approximation of the average headcount throughout the year; *Debt*, calculated as total liabilities divided by total equity; *Market listing* is a dichotomous variable that takes a value of 1 if the firm is listed on the stock market, and 0 otherwise; although there are few listed firms in our sample, we are interested in controlling for its potential effect; *Foreign ownership* is a categorical variable based on foreign capital investment in the firm (as a percentage), which takes a value of 1 when it is more than or equal to 30%, and 0 otherwise; *Export*

*intensity*, calculated as foreign sales over total sales. Finally, year and industry effects are also included by using dummy variables.

## 4. Econometric analysis

The econometric technique used in this study consists of System-GMM estimation (Arellano & Bover, 1995; Blundell & Bond, 1998). This approach —by adding additional moment restrictions— involves using lagged first differences of the dependent and independent variables as instruments in the level equations, thereby correcting for any bias that could arise using the standard GMM estimator<sup>2</sup>. Furthermore, the great number of firms in our sample considerably exceeds the number of instruments, which is a key aspect of strong instruments. The robust GMM estimator provides estimations that are robust to the presence of likely heteroscedasticity and autocorrelation issues. We apply a two-step approach because such GMM estimators are asymptotically more robust and efficient than one-step ones.

However, the System-GMM has a potential problem, i.e., the proliferation of instruments that could overfit the endogenous variable. Following Roodman (2009b), we limit the number of instruments by using only three lags for instruments in the first-differenced equations and collapsing the instrument sets. We also treat the lagged dependent variable of interest (i.e. ROA) as endogenous<sup>3</sup>. Time-specific effects are also considered to reduce the influence of cross-sectional error dependence in short dynamic panels.

Additionally, the Hansen J-test and the Diff-in-Hansen test are applied to verify the null hypothesis of instrument validity, as well as the validity of the additional moment restriction necessary for the System-GMM. Moreover, the Arellano-Bond test for serial correlation is adapted to test whether there is a second-order serial correlation in the first differenced residuals. Our tests confirm there is no second-order serial correlation and the GMM estimator is consistent.

As regards the number of lags to consider in the specification of the models for the GD measure, we follow Serena and Perron (2001) for the selection of lag lengths and use a Modified Akaike Information Criterion (MAIC) that accounts for the severity of size distortions and power loss, using local asymptotic properties. The optimal lag length is equal to one in all cases.

## 5. Results

Table 3 presents the descriptive statistics, Variance Inflation Factor (VIF) values, and correlations. This table reveals that some variables are highly and significantly correlated (e.g., the correlations between Export intensity and GD, Productivity, and HCQ, and Foreign ownership and HCQ). According to the analysis of VIF values, multicollinearity is not a problem in our study, as the VIFs for all independent and control variables are below the 5.3 and 5.0 thresholds advocated by Kennedy (1992), and Marquart and Snee (1975), respectively. Most of the variables have VIFs below 1.5.

**Table 3.** Descriptive statistics and correlations for SMEs: 1994-2014

	Mean	s.d.	VIF	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>1</b>	0.08	0.09	-														
<b>2</b>	0.70	0.27	4.18	-0.06*													
<b>3</b>	0.03	0.15	1.19	-0.03*	0.02*												
<b>4</b>	0.04	0.14	1.20	-0.04*	0.02*	-0.01											
<b>5</b>	0.16	0.23	1.36	0.12	0.70*	0.03*	0.03*										
<b>6</b>	0.04	0.18	1.03	0.01*	-0.02*	0.01	0.01	0.05*									
<b>7</b>	26.42	21.33	1.14	-0.04*	-0.09	0.04	0.03	-0.02	-0.03*								
<b>8</b>	9.9	0.49	1.65	0.01*	0.03	0.01	0.01	0.01	0.00	0.20							
<b>9</b>	3.75	1.36	1.40	0.04	-0.04*	0.06*	0.05*	-0.03*	0.09*	0.25*	0.33*						
<b>10</b>	0.01	0.03	1.10	0.02	-0.02*	-0.02	-0.04	-0.01	-0.01	0.23*	0.07*	0.02*					
<b>11</b>	0.01	0.02	1.08	0.01	0.05	0.01	0.00	0.06	-0.01	0.08*	0.20*	0.03*	0.03*				
<b>12</b>	40.15	33.91	1.21	-0.03*	-0.01*	-0.06	-0.08	-0.01*	0.10*	0.12*	0.47*	0.17*	0.04*	0.03*			
<b>13</b>	0.08	0.25	1.05	-0.03	0.03	0.04	0.03	0.04	-0.01	0.01	-0.01	0.01	-0.02	0.00	-0.06		
<b>14</b>	0.03	0.17	1.08	0.05	0.02	-0.03	-0.02	0.05	0.02	0.13*	0.18*	0.15*	0.04*	0.04*	0.16*	0.06*	
<b>15</b>	0.10	0.26	1.33	0.04*	-0.01	-0.05	-0.05	0.02	0.03	0.07	0.40*	0.30*	-0.04	0.02	0.23	-0.03	0.01

Observations = 21,138; Firms = 2,217 \* Denotes 99% significant correlations

1. ROA; 2. GD; 3. RPD; 4. UPD; 5. Export intensity; 6. Sales growth; 7. Age; 8. HCQ; 9. Size

10. Advertising intensity; 11. R&D intensity; 12. Productivity; 13. Debt; 14. Listing; 15. Foreign ownership

Tables 4 and 5 report the GMM estimation results for the period of economic stability/growth (i.e. 1994-2008) and crisis (i.e. 2009-2014), respectively. We estimate four models in each case. Model 1 in Tables 4-5 is the base model. Model 2 in both tables illustrates the main effects that the linear, quadratic, and cubic terms of GD have on performance. This model is used to check the existence of three differentiated levels of GD. Finally, Models 3 and 4 in both tables report the effects of the interaction between both growth-seeking

strategies. Model 3 shows the joint effects between RPD and GD, while Model 4 illustrates the combined effects between UPD and GD.

**Table 4.** Regression analysis during times of economic stability/growth (1994-2008)

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>ROA</b>	0.006***	0.008***	0.009***	0.009***
<b>Export intensity</b>	-0.038***	-0.036***	-0.033***	-0.034***
<b>Sales growth</b>	0.334***	0.343***	0.350***	0.360***
<b>Age</b>	0.002	0.001	0.001	0.002
<b>HCQ</b>	0.241†	0.244†	0.208	0.206
<b>Size</b>	0.263***	0.238***	0.249***	0.254***
<b>Advertising intensity</b>	-0.011***	-0.009***	-0.013***	-0.013***
<b>R&amp;D intensity</b>	-0.008	-0.008	-0.011	-0.012
<b>Productivity</b>	0.008***	0.011***	0.012***	0.014***
<b>Debt</b>	-0.001	-0.001	-0.002	-0.001
<b>Market listing</b>	0.325***	0.330***	0.381***	0.384***
<b>Foreign ownership</b>	-0.403***	-0.390***	-0.404***	-0.411***
<b>GD</b>		-4.818**	-3.716**	-5.918**
<b>GD<sup>2</sup></b>		12.899**	11.462*	14.011**
<b>GD<sup>3</sup></b>		-5.326**	-4.584*	-5.994*
<b>RPD</b>			1.687***	
<b>GD x RPD</b>			-2.484**	
<b>GD<sup>2</sup> x RPD</b>			5.658**	
<b>GD<sup>3</sup> x RPD</b>			-2.752*	
<b>UPD</b>				-1.352*
<b>GD x UPD</b>				5.745*
<b>GD<sup>2</sup> x UPD</b>				-4.004*
<b>GD<sup>3</sup> x UPD</b>				0.195†
<b>Hansen J-test</b>	0.306	0.264	0.404	0.575
<b>Diff-in-Hansen test</b>	0.326	0.292	0.279	0.363
<b>AR(1)</b>	0.000	0.000	0.000	0.000
<b>AR(2)</b>	0.531	0.480	0.538	0.592
<b>Observations</b>	5,132	5,132	4,801	4,801
<b>Firms</b>	787	787	696	696

p<0.10; \*p<0.05; \*\*p<0.01, \*\*\*p<0.001. Industry and year estimates are not shown in this table. Regressions with robust standard errors. The row for the Hansen J-test reports the p-values for the null hypothesis of instrument validity. The values reported for the Diff-in-Hansen test are the p-values for the validity of the additional moment restriction necessary for system GMM. The values reported for AR(1) and AR(2) are the p-values for first and second-order autocorrelated disturbances in the first differences equations

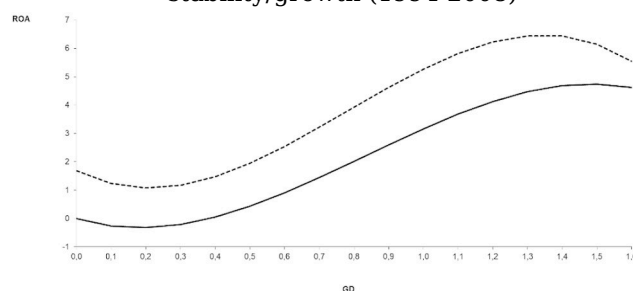
All the coefficients of the linear terms of GD in Models 2, 3, and 4 in Tables 4 and 5 are negative and significant, while the squared terms are positive and significant, and the cubic terms are negative and significant. These results suggest an S-shaped or sigmoid curvilinear link between GD and ROA in the sample of SMEs under study, independently of the period of study considered. This is consistent with the existence of three levels of GD, where each level, furthermore, has a different impact on performance.

**Table 5.** Regression analysis during times of economic crisis (2009-2014)

	Model 1	Model 2	Model 3	Model 4
ROA	0.003***	0.004***	0.006***	0.007***
Export intensity	-0.059***	-0.052***	-0.050***	-0.051***
Sales growth	0.254***	0.261***	0.270***	0.296***
Age	0.001	0.001	0.001	0.001
HCQ	0.217†	0.219†	0.188	0.185
Size	0.222***	0.197***	0.170***	0.171***
Advertising intensity	-0.015***	-0.014***	-0.019***	-0.020***
R&D intensity	-0.007	-0.005	-0.008	-0.009
Productivity	0.012***	0.014***	0.015***	0.016***
Debt	-0.004	-0.004	-0.002	-0.002
Market listing	0.289***	0.296***	0.342***	0.346***
Foreign ownership	-0.360***	-0.349***	-0.362***	-0.381***
GD		-5.508*	-5.003**	-6.763**
GD <sup>2</sup>		10.966*	8.895*	11.906**
GD <sup>3</sup>		-5.699*	-4.654†	-6.410*
RPD			0.883***	
GD x RPD			-2.780**	
GD <sup>2</sup> x RPD			5.171**	
GD <sup>3</sup> x RPD			-2.792*	
UPD				-1.749*
GD x UPD				5.238*
GD <sup>2</sup> x UPD				-4.374*
GD <sup>3</sup> x UPD				0.152†
Hansen J-test	0.300	0.263	0.386	0.604
Diff-in-Hansen test	0.319	0.292	0.306	0.373
AR(1)	0.000	0.000	0.000	0.000
AR(2)	0.548	0.451	0.626	0.537
Observations	1,983	1,983	2,103	2,103
Firms	787	787	696	696

$p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ , \*\*\* $p < 0.001$ . Industry and year estimates are not shown in this table. Regressions with robust standard errors. The row for the Hansen J-test reports the p-values for the null hypothesis of instrument validity. The values reported for the Diff-in-Hansen test are the p-values for the validity of the additional moment restriction necessary for system GMM. The values reported for AR(1) and AR(2) are the p-values for first and second-order autocorrelated disturbances in the first differences equations

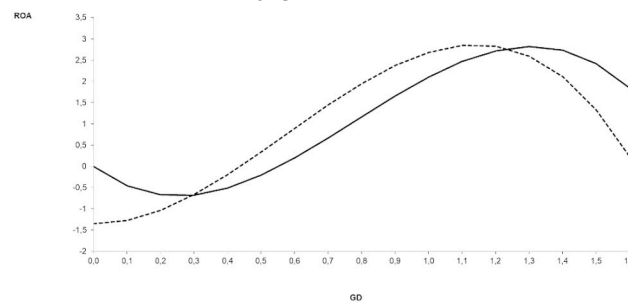
Model 3 in Table 4 reports that the coefficient of RPD is positive and significant ( $p < 0.001$ ). This means SMEs implementing RPD may perform better than those SMEs that do not diversify or implement UPD during times of economic boom. On the other hand, the coefficient of the interaction effect of RPD with the linear term of GD is negative and significant ( $p < 0.01$ ), while the interaction effects of RPD with the quadratic and cubic terms are also positive and negative and significant, respectively ( $p < 0.01$  and  $p < 0.05$ ). To further examine the joint effects between GD and RPD, we construct Figure 1a by drawing on Model 3's results. This figure confirms the positive interactive effects of both seeking-growth strategies on performance. It also reveals that the positive effect of an RPD seems to be stronger when SMEs have low-moderate GD, whereas this effect weakens when SMEs have HGD. These findings are consistent with the arguments in Hypothesis 1a.

**Figure 1a.** Graphical joint effects of seeking-growth strategies (RPD and GD) during times of economic stability/growth (1994-2008)

The dashed line denotes the joint effect of both strategies on ROA (expressed in %)

Model 4 in Table 4 shows that the coefficient of UPD is negative and significant ( $p < 0.05$ ), suggesting that SMEs implementing UPD may perform worse than those SMEs that do not diversify or implement RPD during times of economic boom. Likewise, the coefficient of the interaction effect of UPD with the linear term of GD is negative and significant ( $p < 0.05$ ), while the interaction effects of RPD with the quadratic and cubic terms are also positive and negative and significant, respectively ( $p < 0.05$  and  $p < 0.05$ ). To further explore the nature of the joint effects between GD and RPD, we construct Figure 1b by drawing on Model 4's results. This figure shows that only the combination of UPD with MGD has a positive impact on performance. In marked contrast, the combinations of UPD with HGD and LGD have a negative impact on performance. These findings provide support for the arguments in Hypothesis 1b.

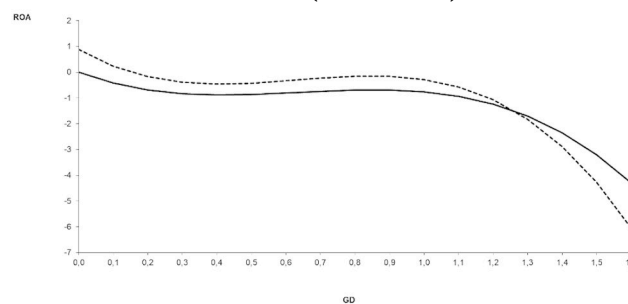
**Figure 1b.** Graphical joint effects of seeking-growth strategies (UPD and GD) during times of economic stability/growth (1994-2008)



The dashed line denotes the joint effect of both strategies on ROA (expressed in %)

Model 3 in Table 5 reports that the coefficient of RPD is also positive and significant ( $p < 0.001$ ), which means SMEs implementing RPD may also outperform those SMEs that do not implement PD strategies or implement UPD during times of economic crisis. The coefficient of the interaction effect between RPD and the linear term of GD is negative and significant ( $p < 0.01$ ), while the interaction effects between RPD and the quadratic and cubic terms are also positive, negative, and significant, respectively ( $p < 0.01$  and  $p < 0.05$ ). By drawing on Model 3's results, Figure 2a reveals that RPD has positive effects solely when SMEs also opt for low-moderate GD, whereas this effect weakens when SMEs choose HGD. This is consistent with our arguments in Hypothesis 2a.

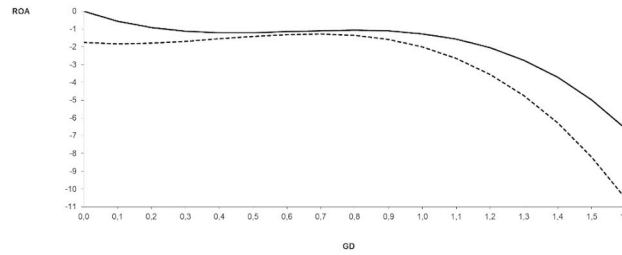
**Figure 2a.** Graphical joint effects of seeking-growth strategies (RPD and GD) during times of economic crisis (2009-2014)



The dashed line denotes the joint effect of both strategies on ROA (expressed in %)

Finally, Model 4 in Table 5 reveals that the coefficient of UPD is negative and significant ( $p < 0.05$ ), suggesting that SMEs implementing UPD may also perform worse than those SMEs that do not implement PD strategies or implement RPD during times of economic crisis. The coefficient of the interaction effect between UPD and the linear term of GD is negative and significant ( $p < 0.05$ ), while the interaction effects between RPD and the quadratic and cubic terms are also positive negative and significant, respectively ( $p < 0.05$  and  $p < 0.05$ ). By drawing on Model 4's results, Figure 2b shows that the combination of UPD with low, moderate, and high levels of GD has a negative impact on performance; although such impact is relatively stronger with LGD, and mainly so when it is high. These findings are consistent with the arguments in Hypothesis 2b.

**Figure 2b.** Graphical joint effects of seeking-growth strategies (UPD and GD) during times of economic crisis (2009-2014)



The dashed line denotes the joint effect of both strategies on ROA (expressed in %)

## 6. Discussion and conclusions

This study is one of the first attempts to explore the joint effects of different combinations of growth-seeking strategies on performance in SMEs under drastically different environmental conditions. Specifically, the primary aim is to discover the best mix of strategies during times of economic stability/growth and crisis in these firms. Most managers around the world have been forced to deal with sharply changing environmental conditions over the last 20 years, even before the Covid-19 pandemic: years of economic stability/growth have been followed by several years of a severe global economic-financial crisis that have threatened the survival of myriad companies, especially SMEs. The SME sector is the most dynamic and/or enterprising in an economy, but it is also one of the first to be affected by a potential economic-financial crisis. This is precisely what happened with the recession at the end of the 2000s. Increased insolvency and bankruptcy rates affected SMEs more than large corporations (e.g., Mayr et al., 2017; OECD, 2009, 2022). Under changing environmental conditions, SME managers are most probably required to reshape their decision-making processes (Beliaeva et al., 2020; García-Carbonell et al., 2021), including those decisions relating to the products offered and the markets served.

Our key findings may be summarized as follows: First, there are two combinations of growth-seeking strategies that prevail (in terms of their impact on performance) during times of economic stability/growth and crisis, namely, an RPD strategy combined with LGD and MGD (although the joint effect of both combinations seems to be greater during times of economic growth). Second, two other combinations have a negative impact on performance regardless of the environmental conditions: a UPD strategy combined with HGD and LGD. Third, there are two other combinations with a significant positive or negative impact on performance depending on environmental conditions. In this vein, the combination of an RPD and HGD is favorable during times of economic stability/growth (as it has a positive, albeit decreasing, impact on profitability), but unfavorable during a recession. The mix of UPD and MGD is also favorable during times of stability/growth, but unfavorable during a crisis. Finally, when both growth-seeking strategies are considered separately, the right PD strategy for SMEs during times of economic growth and crisis is the related one, because it is linked to positive profitability. Meanwhile, the most favorable levels of GD are moderate-high at times of economic stability/growth, but low-moderate during a recession. Interestingly, the S-shaped curve is flatter and negatively related to performance for the different levels of GD, and more negative for high levels.

### 6.1 Implications for research

Our findings have several implications for the research field. First, we extend the state-of-the-art on the interactive effects of two of the most popular growth-seeking strategies (PD and GD) on performance in a large sample of SMEs under completely different environmental conditions, namely, economic stability/growth, and crisis. To the best of our knowledge, this issue has largely been ignored. This omission is important because what usually happens in the real business world is that SME managers (like the managers of large corporations) normally pursue both types of strategies simultaneously under changing environmental conditions (Benito-Osorio et al., 2020; Mammen et al., 2020). In our study, the mix of both growth-seeking strategies is positive or negative in terms of profitability depending on environmental conditions. Our findings challenge the assumption that all combinations of both types of strategies are positive or negative *per se* and confirm the need to control more carefully the impact of the environment. Our study ratifies the important role played by environmental conditions in the strategy-performance linkage reported in past research (e.g., Prescott, 1986; Shen et al., 2018; Zúñiga-Vicente et al., 2019).

Second, our findings contribute to the ongoing debate among a large body of scholars interested in testing whether both types of corporate strategies considered here are complementary or substitutive when used in combination. This research stream, with some exceptions (e.g., Benito-Osorio, 2020; Qian, 2002; Li et al., 2012), has primarily been conducted with samples of large multinational enterprises (MNEs), and mostly

during times of economic stability. In the case of SMEs considered here, the results provide strong empirical support for all our hypotheses under changing environmental conditions.

In line with Hypotheses 1a (1b), our findings indicate that the mix of related (unrelated) PD and low-moderate-high (moderate) levels of GD are complementary when environmental conditions are favorable. Our findings suggest that SMEs implementing RPD are more likely to be more competitive in foreign markets, especially if these firms also opt for LGD and MGD (i.e. SMEs in Stages 1 and 2 of internationalization) when the macroeconomic environment is stable. The interaction between close product relatedness and low-moderate, and, to a lesser extent, HGD may facilitate the more effective implementation of differentiated synergies that provide clients with high value that is also competitive abroad (Hitt et al., 1997; Qian, 2002). In these situations, SMEs in foreign markets are more likely to take advantage of (or better exploit) benefits related to economies of scope and learning that are normally linked to RPD, whose implementation may furthermore improve the management of the diversity and complexity generated when an SME is also engaged in LGD and MGD. A plausible explanation is that those SMEs engaging in such strategy might easily replicate the structures and capabilities also established in their international operations, whereby they could reduce their potential governance, coordination, and transaction costs.

The existence of complementarity between UPD and MGD suggests that SMEs managers may well exploit certain unique and inimitable synergies during times of economic stability/growth: for example, by sharing marketing and technological information, or even by transferring the managerial competences required to manufacture different types of products (Markides & Williamson, 1996; Robins & Wiersema, 1995). In addition, as argued by Hitt et al. (1997) and others (e.g., Chang & Wang, 2007), because the customer base is broader for MGD, SMEs might benefit more from the economies of scale associated with the manufacture of different products. The ability to market different types of products at competitive prices might also help these SMEs maintain a sustainable advantage while exerting greater competitive pressures on their competitors. This finding is partially consistent with the results obtained by Li et al. (2012), who also find that pursuing a UPD strategy may not necessarily compromise SMEs' performance when they moderately internationalize. Our results therefore seem to contradict the common belief that SMEs should not implement an UPD strategy during times of economic stability/growth.

The substitution effect when SMEs opt for HGD and LGD during times of economic stability while also implementing UPD means they will record a drop in performance compared to their competitors that are equally internationalized but have not diversified their products or have done so in a related way. Here, in line with Qian (2002), our findings suggest that, in general, it is not easy for both strategies to go hand-in-hand in SMEs (as also occurs in the case of MNEs), even when environmental conditions are favorable. In these situations, as suggested by Chang & Wang (2007) and others (e.g., Ruigrok & Wagner, 2003), the greater diversity in products, distribution channels, suppliers, and clients associated with a UPD strategy is more likely to add greater costs to the adjustment between a firm's internal structure and its external environment.

In consonance with Hypotheses 2a and 2b, our results indicate that solely the mix of an RPD strategy with LGD and MGD are complementary when environmental conditions are unfavorable. The remaining four combinations of product and internationalization levels are substitutive under such conditions. In particular, during times of economic stability, the mix of RPD with LGD and MGD may significantly enhance the opportunity to achieve economies of scale and scope during times of economic crisis (Hitt et al., 1997; Qian, 2002; Zúñiga-Vicente et al., 2019). It stands to reason that the closer the interdependencies between business segments, the greater the opportunities to create value (or improve profitability) by sharing resources or transferring skills and key competences between such businesses in both national and international markets. As some scholars posit (e.g., Hitt et al., 1997; Hitt et al., 2006), integrating such growth-seeking strategies during times of crisis (if the level of GD is not high) may help SMEs to better exploit interdependencies across their business segments in different markets to achieve different types of synergies (commercial, production, and managerial).

In turn, our findings suggest that SMEs pursuing UPD and any level of GD during times of crisis may incur in higher managerial transaction costs and information processing demands. While some scholars argue that it is already difficult for firms in general (and SMEs in particular) to juggle these combinations of strategies under favorable conditions (e.g., Dennis et al., 2002; Chang & Wang, 2007; Qian, 2002), this may become an even greater uphill struggle during a global downturn, probably due to the higher uncertainty in both national and foreign markets. Furthermore, the financial restrictions these firms usually face in times of crisis and the absence of well-developed internal capital markets may also seriously hamper their ability to exploit financial synergies. In sum, our findings suggest that the liability of smallness is much more evident and will thus have a more detrimental impact on SMEs performance during times of crisis than in times of stability.

## 6.2 Implications for practitioners

Our findings suggest that SMEs managers should pay particular attention to the mix of growth-seeking strategies they choose when they face severely changing environmental conditions, as this may have a major

impact on their firms' performance, growth, and survival odds. According to our results, during times of economic stability/growth SMEs managers should pursue an RPD strategy combined with LGD and MGD and, to a lesser extent, the same related strategy combined with HGD for the best possible performance. Combining a UPD strategy with MGD can also be an attractive choice when macroeconomic conditions are favorable.

In contrast, during times of crisis, SMEs managers should try at all costs to avoid the following mix of strategies: UPD and low-moderate-high levels of GD, as well as RPD and HGD. Nonetheless, managers should be aware that the worst combination in terms of profitability is UPD and HGD during times of prolonged crisis. In any case, as regards those managers seeking to avoid major fluctuations when macroeconomic conditions change drastically across the years, it seems that the best mix is as follows: an RPD strategy and low-moderate levels of GD. In other terms, this seems to be the mix of growth-seeking strategies that would allow SMEs to be more resilient in periods of severe economic crises.

Therefore, our findings highlight that there are two combinations of growth-seeking strategies that SME managers should opt for if they want to obtain better performance in both periods of economic stability and crisis: RPD and low-moderate levels of GD. This suggests the importance of maintaining a "dominant logic" when SME managers make critical resource allocation decisions across different businesses and markets (Prahalad & Bettis, 1986; Markides, 1992).

Our results have also implications for policymakers. Policymakers commonly design different support systems (e.g., via government grants or subsidies) for internationalizing domestic SMEs (mainly via exports) to improve their competitiveness. In light of our findings, the design of government aid should consider which type of PD strategy and level of GD adopt SMEs to enhance the efficiency of the aid granted. On the other hand, taking into account the major implications of SMEs at a social and economic level (i.e. in terms of contribution to employment and GDP of an economy) and given the major resource constraints (especially, financial resources) normally faced by these firms, policymakers should design different instruments that facilitate quick access to different public/private funding channels, mainly in periods of crisis and when these firms follow less beneficial combinations of growth-seeking strategies.

### 6.3 Limitations and future avenues of research

Our study is not exempt from certain limitations. First, while there are significant differences between SMEs and large corporations, it is important to remember that SMEs are also a heterogeneous group. The SMEs population itself is usually composed of highly diverse businesses in terms of age, ownership structure, innovation activity, and owners' profiles and aspirations. The evidence reveals that SMEs tend to be highly heterogeneous in their strategic behavior. Further research could explore whether there are significant differences in the best/worst combinations under favorable and unfavorable conditions in terms of their ownership structure (e.g., family vs. non-family firms). Stadler et al. (2018) find that family managers are usually more suited to overseeing PD than GD. Future studies could examine the case of the so-called born-global SMEs (i.e. those SMEs that internationalize from their establishment) to check whether the results are similar.

A further limitation involves the method used to measure the degree of GD. Due to data availability, and to facilitate comparisons with prior research, this study has also used an entropy measure of GD by grouping countries into four regions. We are aware that this approach may not be entirely satisfactory because the countries in each region considered may be institutionally very different (e.g., in terms of their cultural, political, social, and economic systems, or their market environment). Future research should therefore use, whenever possible, more detailed country-specific data. Such data would allow us to explore whether an SME's domestic geographic dispersion also influences its initial and subsequent decisions to internationalize (e.g., Santangelo & Stucchi, 2018). Our sample has been also limited to manufacturing SMEs in Spain. It would be interesting to replicate this study with firms from other countries, while also using samples of service SMEs to discover whether our findings can also be extrapolated. Finally, it would also be interesting to replicate this study during the COVID-19 pandemic, energy crisis, and other present (e.g., the conflict/war in Ukraine) and future crisis scenarios to verify the extent to which the results are similar, or not.

### Acknowledgements

This research was supported by the Ministerio de Ciencia y Tecnología - Spain (Funder Identifier: <https://dx.doi.org/10.13039/501100006280>) Project PID2021-124641NB-I00



## Footnotes

- <sup>1</sup> The way in which both variables have been built for this research can be obtained from the authors upon request
- <sup>2</sup> The advantages of the System-GMM estimator over the traditional first-differenced GMM estimator of Arellano and Bond (1991) are more pronounced when the panel units are large (over 30) and the time periods are relatively small (no more than 25), as in the case in hand
- <sup>3</sup> The GMM estimations involve the xtabond2 package in Stata (see Roodman, 2009a)

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